IN THE CLAIMS

Claims 1-12 (Cancelled)

13. (New) An AV signal processing apparatus for detecting a boundary between scenes, comprising:

feature amount extraction means for extracting feature amounts of segments each formed from a series of frames which form an AV signal;

similarity measurement means for measuring a similarity between a segment and other segments in a predetermined time domain between the past and the future using said feature amounts;

similar segments detection means for detecting similar segments according to said similarity for each segment in said predetermined time domain;

similar segments counting means for counting said similar segments in said past and said future in said predetermined time domain for each segment;

boundary likelihood measurement calculation means for calculating boundary likelihood measurement value according to a counted amount of said similar segments in said predetermined time domain for each segment;

pattern detection means for detecting a pattern of existence of said boundary likelihood measurement values in said predetermined time domain; and

boundary discrimination means for discriminating a boundary of a scene according to said pattern.

14. (New) The AV signal processing apparatus according to claim 13, wherein said AV signal includes at least one of a video signal and an audio signal.

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15. (New) The AV signal processing apparatus according to claim 13, further comprising scene intensity value calculation means for calculating a scene intensity value from a total of the absolute values of said boundary likelihood measurement values of at least four segments including a present segment for each segment;

wherein said boundary discrimination means discriminates a boundary of a scene according to said scene intensity value which reaches a predetermined value.

16. (New) The AV signal processing apparatus according to claim 14, further comprising audio segment production means or detecting, when the AV signal includes a video signal, a shot which is a basic unit of a video segment to produce the audio segment.

17. (New) The AV signal processing apparatus according to claim 14, further comprising audio segment production means for using, when the AV signal includes an audio signal, at least one of the feature amount of the audio signal and a no sound period to produce an audio segment.

18. (New) The AV signal processing apparatus according to claim 14, wherein the feature amounts of the video signal at least include a color histogram.

19. (New) The AV signal processing apparatus according to claim 14, wherein the feature amounts of the video signal at least include at least one of a sound volume and a spectrum.

20. (New) The AV signal processing apparatus according to claim 13, wherein said boundary discrimination means compares the measurement value with a preset threshold value to discriminate whether or not the reference segment is a boundary of the scene.

21. (New) An AV signal processing method for an AV signal processing apparatus for detecting a boundary between scenes, comprising the steps of:

extracting feature amounts of segments each formed from a series of frames which form said AV signal;

measuring a similarity between a segment and other segments in a predetermined time domain between the past and the future using said feature amounts;

detecting similar segments according to said similarity for each segment in said predetermined time domain;

counting said similar segments in said past and said future in said predetermined time domain for each segment;

calculating boundary likelihood measurement value according to said amount of said similar segments in said predetermined time domain for each segment;

detecting a pattern of existence of said boundary likelihood measurement values in said predetermined time domain;

calculating a scene intensity value from total of the absolute values of said boundary likelihood measurement values of at least four segments including a present segment for each segment; and

discriminating a boundary of a scene according to said pattern and said scene intensity value which reaches a predetermined value.

22. (New) A recording medium on which a computer readable program for AV signal processing for detecting a boundary between scenes is recorded, the program comprising:

extracting feature amounts of segments each formed from a series of frames which form said AV signal;

measuring a similarity between a segment and other segments in a predetermined time domain between the past and the future using said feature amounts;

detecting similar segments according to said similarity for each segment in said predetermined time domain;

counting said similar segments in said past and said future in said predetermined time domain for each segment;

calculating boundary likelihood measurement value according to said amount of said similar segments in said predetermined time domain for each segment;

detecting a pattern of existence of said boundary likelihood measurement values in said predetermined time domain;

calculating a scene intensity value from total of the absolute values of said boundary likelihood measurement values of at least four segments including a present segment for each segment; and

discriminating a boundary of a scene according to said pattern and said scene intensity value which reaches a predetermined value.

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